

AMENDMENTS TO THE SPECIFICATION

THE TITLE OF THE INVENTION

Please amend the title, to read as follows:

~~PRE FORMATION APPARATUS, PRE FORMATION METHOD AND MAIN
FORMATION METHOD UTILIZING THE PRE FORMATION APPARATUS, AND
PRINTED FILM~~ PRELIMINARY FORMING APPARATUS, PRELIMINARY FORMING
METHOD AND FORMING METHOD THAT USES THE APPARATUS, AND FILM
WITH PICTURE

AMENDMENTS TO THE SPECIFICATION

Please amend the following paragraph beginning at page 3-4, page 4, line 11, as shown below.

In order to achieve the objects, a pre-formation apparatus according to the present invention, includes a film feeder for supplying a printed film to a pre-forming section where a pre-formation is performed; an upper and a lower clamp members for sandwiching the printed film in the pre-forming section, and having a through hole; a heater movable to and away from the pre-forming section for heating to plasticize the printed film sandwiched by the upper and lower clamp members in the pre-forming section before the pre-formation; pre-forming molds movable to and away from the pre-forming section for pre-forming the printed film via the through hole; and a film die punch for punching the printed film after the pre-formation. The pre-forming molds include a male mold for contacting the plasticized printed film and a female mold to mate with the male mold for a vacuum formation. The pre-formation apparatus further includes: a pitch detecting section facing the pre-forming section, within a pre-formation pitch of the printed film in a film flow direction for detection of a film mark; meandering detection sections between the pre-forming section and the pair of rollers which support the printed film, for detecting a meandering prevention line printed on the printed film; and a meandering prevention device controlled by this second detection section as part of the film feeder. Further, the upper and lower clamp members generally covers a region of the printed film exposed to the meandering detection sections along the film flowing direction.

Please amend the following paragraph beginning at page 5, line 14, as shown below.

The pre-formation apparatus further includes: meandering detection sections disposed between the pre-forming section and the pair of rollers which support the printed film for detecting a meandering prevention line printed on the printed film; and a meandering prevention device controlled by this second detection section as part of the film feeder. These enable to further reduce positional error widthwise of the printed film. Particularly in the present invention, after the formed portion is punched, the film is rarely left with bulges, which helps the meandering prevention device work effectively and thereby improve widthwise dimensional accuracy dramatically over conventional in-mold formation.

Further, the upper and lower clamp members generally cover a region of the printed film exposed to the meandering detection sections along the film flowing direction.

Preferably, the pitch detecting section for detecting the film mark is displaced in a direction perpendicular to the film flow direction and independent from the pre-forming molds.

Please amend the following paragraph beginning at page 7, line 2, as shown below.

~~Preferably the pre-formation apparatus further includes: meandering detection sections disposed between the pre-forming section and the pair of rollers which support the printed film for detecting a meandering prevention line printed on the printed film; and a meandering prevention device controlled by this second detection section as part of the film feeder. These enable to further reduce positional error widthwise of the printed film. Particularly in the present invention, after the formed portion is punched, the film is rarely left with bulges, which helps the meandering prevention device work effectively and thereby improve widthwise dimensional accuracy dramatically over conventional in-mold formation.~~

~~— Preferably, the upper and lower clamp members generally cover a region of the printed film exposed to the meandering detection sections along a film flowing direction. Further, preferably, wherein, the heater does not face the region of the printed film exposed to the meandering detection sections along a film flowing direction. These arrangements enable to reduce heat deformation of the region which includes the meandering prevention line, making accurate widthwise control for a short film pitch. Still preferably, the meandering detection section is provided on two sides of the printed film with respect to a film widthwise direction.~~

On the other hand, a pre-formation method which uses the pre-formation apparatus according to the present invention includes: a step of causing the film feeder to supply the printed film to the pre-forming section where a pre-formation is performed; a step of stopping the film supply through detection of the film mark by the pitch detecting section within the pitch in the film flowing direction of the printed film; a step of causing the upper and a lower clamp members to sandwich a margin around a formation region of the printed film; a step of moving a heater close to the pre-forming section and heating to plasticize the printed film; a step of performing the pre-formation using the pre-forming molds; and a step of punching the pre-formed film for making a formation film for insertion into the main mold.